

ART. XI.—*Amorphous Phosphorus.*

BY PROFESSOR ANDREW.

[Read before the Royal Society of Victoria, 16th November, 1876.]

IN 1873 I noticed on the surface of a quantity of chocolate-coloured, amorphous phosphorus, a quantity of clear, syrupy liquid, having a strong acid reaction. It appeared to contain phosphorous acid, but there are probably other oxygen compounds of phosphorus present. The liquid was poured off, and the residue washed and put away until the beginning of this year, when I found that as much more of a similar liquid had collected in the bottle (specimen produced). Mr. Ford tells me that he has noticed the same thing, and that Professor Smith, of Sydney, had also observed it, and was in the habit of giving it for analysis to students as a substance containing phosphorous acid. It is possible that the formation of the fluid may be due to the residue of ordinary phosphorus which the bisulphide of carbon used in its preparation has failed to remove, or to instability of the amorphous phosphorus causing a gradual return to its original state under certain conditions. This can only be ascertained by repeated experiments. I would invite the attention of members to the subject, which is of considerable practical importance now that the substance is so much used by itself in the manufacture of safety matches. (The sample was left for the use of any members who wished to examine it.)

H. M. A.